LSMM-SG HW1 Report

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1 Details of MED pipeline

- Number of cluster = 40
- Pooling proportion = 0.1
- Number of vocab = 983

Using exist python files, i add kmeans and svm algorithms. First, i apply 0.1 pooling proportion from magnificent data set to make select.mfcc.csv. file. For kmeans, 40 clusters are designed due to speed. Created kmean-model is trained by pooling data. To higher the AP / mAP, i manage to compare other svm kernel, chi-square, to Radical basis function kernel(RBF).

2 Final experiment result

For each different kernel algorithm, values of mAP are shown below. Bold number represent highest value for each P00X_val.list from all_val.list.

Kernel	Feature Type	P001	P002	P003
RBF	MFCC	**0.1563948186004781**	0.2728309708019271	0.16010158857477708
	ASR	0.04730900402959225	0.07700639060486283	0.13877814630642932
Chi-square	MFCC	0.10465693813859794	**0.335895255556347**	**0.24784299751226685**
	ASR	0.04460867334370946	0.07066984542127784	0.4011949849118269

3 Result Discussion

As result above, there are quite difference between kernel and feature types. So overcome this gap, i chose set for P00X_best.lst among the highest kernel-feature pair section. It would be better to try higher number of cluster and amount of polling proportions or making feature transformation with MFCC and ASR as instruction suggested.

- Git-hub URL : https://github.com/daeun-j/11775.git
- AWS time comsumption : 45.474137931 hours

References

[1] https://github.com/xty213/11775/

31st Conference on Neural Information Processing Systems (NIPS 2017), Long Beach, CA, USA.